

# Comparisons of Job Characteristics

**Focus Occupation:** [Engineers, All Other \(17-2199\)](#)

**Associated Occupation:** [Environmental Engineers \(17-2081\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

|    |  |
|----|--|
| << | Focus occupation element is much lower             |
| <  | Focus occupation element is lower                  |
| 0  | Focus occupation element is at a similar level     |
| >  | Focus occupation element is at a higher level      |
| >> | Focus occupation element is at a much higher level |

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 76

**Focus Occupation:** Engineers, All Other (17-2199)

**Associated Occupation:** Environmental Engineers (17-2081)

| Associated Occupation's Key Knowledge Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating |    | Evaluation of Focus Occupation                      |
|--|---------------------------------|--------------------------------|---------------------------|----|---|
| Engineering and Technology                     | 5.7                             | 21.7                           | 20.1                      | 0  | Current knowledge level may be sufficient           |
| Design   | 5.2                             | 17.2                           | 16.5                      | 0  | Current knowledge level may be sufficient           |
| Mathematics                                    | 9.2                             | 16.3                           | 17.1                      | 0  | Current knowledge level may be sufficient           |
| Chemistry                                      | 4.8                             | 15.8                           | 8.8                       | << | Extensive education and/or training may be required |
| Physics  | 4.3                             | 15.7                           | 14.8                      | 0  | Current knowledge level may be sufficient           |
| Law and Government                             | 5.9                             | 13.6                           | 6.4                       | << | Extensive education and/or training may be required |
| Building and Construction                      | 4.0                             | 13.0                           | 6.6                       | << | Extensive education and/or training may be required |
| Public Safety and Security                     | 6.9                             | 12.0                           | 7.9                       | << | Extensive education and/or training may be required |
| Biology  | 3.7                             | 10.0                           | 3.7                       | << | Extensive education and/or training may be required |
| Transportation                                 | 4.6                             | 9.0                            | 4.3                       | << | Extensive education and/or training may be required |
| Geography                                      | 3.9                             | 8.3                            | 3.2                       | << | Extensive education and/or training may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 92

**Focus Occupation:** Engineers, All Other (17-2199)

**Associated Occupation:** Environmental Engineers (17-2081)

| Associated Occupation's Key Skills Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating |  | Evaluation of Focus Occupation |
|---|---------------------------------|--------------------------------|---------------------------|--|--------------------------------|
|---|---------------------------------|--------------------------------|---------------------------|--|--------------------------------|

|                                   |      |      |      |    |  |
|-----------------------------------|------|------|------|----|--|
| Reading Comprehension             | 10.7 | 16.4 | 15.1 | 0  | Current skill level may be sufficient      |
| Critical Thinking                 | 10.8 | 14.5 | 13.8 | 0  | Current skill level may be sufficient      |
| Complex Problem Solving           | 9.1  | 13.9 | 12.7 | 0  | Current skill level may be sufficient      |
| Judgment and Decision Making      | 9.4  | 13.9 | 12.1 | <  | A higher skill level may be required       |
| Systems Analysis                  | 6.5  | 13.1 | 11.7 | <  | A higher skill level may be required       |
| Mathematics                       | 6.2  | 12.3 | 12.8 | 0  | Current skill level may be sufficient      |
| Systems Evaluation                | 6.4  | 11.7 | 11.1 | 0  | Current skill level may be sufficient      |
| Science                           | 4.5  | 11.4 | 11.4 | 0  | Current skill level may be sufficient      |
| Operations Analysis               | 5.0  | 11.0 | 10.8 | 0  | Current skill level may be sufficient      |
| Quality Control Analysis          | 5.9  | 10.4 | 9.7  | 0  | Current skill level may be sufficient      |
| Management of Financial Resources | 3.3  | 7.2  | 5.8  | <  | A higher skill level may be required       |
| Programming                       | 2.2  | 5.6  | 5.3  | 0  | Current skill level may be sufficient      |
| Technology Design                 | 2.6  | 5.5  | 7.9  | >> | Skill level is likely more than sufficient |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

| Abilities  |                                 | Similarity of Focus Occupation to Associated Occupation: 97 |                           |                                |  |
|--|---------------------------------|---|---------------------------|--------------------------------|--|
| Focus Occupation: Engineers, All Other (17-2199)<br>Associated Occupation: Environmental Engineers (17-2081) |                                 |   |                           |                                |  |
| Associated Occupation's Key Abilities Elements   | Average Rating, All Occupations | Associated Occupation's Rating                              | Focus Occupation's Rating | Evaluation of Focus Occupation |  |
| Problem Sensitivity  | 11.1                            | 17.0  | 14.0                      | <                              | Some improvement in abilities may be required      |
| Deductive Reasoning  | 10.6                            | 16.2  | 15.0                      | 0                              | Current ability level may be sufficient            |
| Oral Comprehension   | 12.5                            | 16.1  | 14.8                      | 0                              | Current ability level may be sufficient            |
| Written Comprehension  | 11.0                            | 16.0  | 15.1                      | 0                              | Current ability level may be sufficient            |
| Inductive Reasoning  | 10.2                            | 15.4  | 13.7                      | <                              | Some improvement in abilities may be required      |
| Information Ordering   | 9.9                             | 14.2  | 13.2                      | 0                              | Current ability level may be sufficient            |
| Category Flexibility   | 9.0                             | 13.6  | 12.3                      | <                              | Some improvement in abilities may be required      |
| Flexibility of Closure   | 7.8                             | 13.5  | 9.9                       | <<                             | Extensive improvement in abilities may be required |
| Mathematical Reasoning   | 6.3                             | 13.4  | 13.4                      | 0                              | Current ability level may be sufficient            |
| Perceptual Speed   | 7.4                             | 11.9  | 9.2                       | <<                             | Extensive improvement in abilities may be required |
| Speed of Closure   | 5.9                             | 11.2  | 7.7                       | <<                             | Extensive improvement in abilities may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

There are no common work activities.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 82

**Focus Occupation: Engineers, All Other (17-2199)**  
**Associated Occupation: Environmental Engineers (17-2081)**

| Tools and Technologies  | Exclusivity |
|---|-------------|
| Audio and visual equipment  | 4           |
| Autoclave and sterilizer equipment and accessories  | 12          |
| Business function specific software   | 1           |
| Chemical evaluation instruments and supplies  | 10          |
| Chromatographic measuring instruments and accessories                                     | 16          |
| Computer data input devices   | 2           |
| Computer printers   | 2           |
| Computers   | 1           |
| Content authoring and editing software  | 1           |
| Cutting and crimping and punching tools   | 3           |
| Data management and query software  | 1           |
| Development software  | 4           |
| Electrical measuring and testing equipment  | 7           |
| Electrochemical measuring instruments and accessories                                     | 9           |
| Fluid mechanics equipment   | 11          |
| Gas analyzers and monitors  | 10          |
| Indicating and recording instruments  | 2           |
| Industry specific software  | 1           |
| Information exchange software   | 1           |
| Laboratory centrifuges and accessories  | 13          |
| Laboratory decanting and distilling and evaporating and extracting equipment and supplies | 19          |
| Laboratory electrophoresis and blotting system and supplies                               | 26          |
| Laboratory enclosures and accessories   | 17          |
| Laboratory environmental conditioning equipment   | 24          |
| Laboratory freeze dryers and lyophilizers and accessories                                 | 40          |
| Laboratory furnaces and accessories   | 26          |
| Laboratory incubating equipment   | 20          |
| Laboratory mixing and stirring and shaking equipment and supplies                         | 19          |
| Laboratory ovens and accessories  | 15          |
| Laboratory water purification equipment and supplies                                      | 29          |
| Light and wave generating and measuring equipment   | 4           |
| Liquid and gas flow measuring and observing instruments                                   | 15          |
| Liquid and solid and elemental analyzers  | 19          |
| Metals and metallurgy and structural materials testing instruments                        | 15          |
| Network applications software   | 1           |
| Sampling equipment  | 12          |
| Soil measuring equipment  | 20          |
| Spectroscopic equipment   | 10          |
| Surveillance and detection equipment  | 11          |
| Temperature and heat measuring instruments  | 6           |

|   |   |
|---|---|
| Viewing and observing instruments and accessories | 4 |
| Weight measuring instruments                      | 7 |

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.